

The Honorable Commissioner of Patents  
and Trademarks

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**AMENDMENTS TO THE SPECIFICATION**

Please replace the paragraph beginning on page 3, lines 17-18 with the following paragraphs:

~~—Accordingly, the present invention provides a concept of photonic cells. Further aspects of the present invention apply photonic cells to network routing.~~

In accordance with one aspect of the present application, there is provided a optical network comprising: one or more than one photonic cells, each of said photonic cells comprising: a base node and a plurality of member nodes, each member node within optical reach of said base node; optical paths; said optical paths being established based on information of said photonic cells.

In accordance with another aspect of the present application, there is provided a method for determining an optical path through a network, comprising the steps of: a) defining a photonic cell of said base node; said photonic cell of said base node comprising nodes within an optical reach of said base node in the network; and b) routing said optical path based on information of said photonic cell.

In accordance with yet another aspect of the present application, there is provided computer readable medium storing instructions or statements for use in the execution in a computer of a method for determining an optical path through a network, the method comprising steps of: a) defining a photonic cell of said base node; said photonic cell of said base node comprising nodes within an optical reach of said base node in the network; and b) routing said optical path based on information of said photonic cell.